IN THE CLAIMS

1. (Currently amended) A self-routing communication network, comprising:

a plurality of nodes;

a plurality of star couplers each having a plurality of inputs and a plurality of outputs; and

communication paths coupled between the plurality of star couplers and the plurality of nodes for communication therebetween of frames of information,

wherein

the communication paths include at least one alternative communication path;~~, and~~ the star couplers each include ~~means for~~ an input detector to sense ~~sensing~~ which input of ~~its~~ inputs of the star coupler first receives a frame of information and for passing only the frame of information first received; and

the frames of information each have a frame-start-sequence, and the star couplers each further include a frame-start-sequence changer to change the frame-start-sequence before outputting the frame such that an interconnection failure is diagnosable by analyzing the frame-start-sequence.

2. (Cancelled).

3. (Currently amended) The self-routing communication network of claim 1~~2~~, wherein the ~~means for changing the~~ frame-start-sequence changer comprises a shortener to reduce ~~means for reducing~~ the size of the frame-start-sequence by a predetermined amount.

4. (Original) The self-routing communication network of claim 3, wherein the predetermined amount comprises 2 bits.

5. (Currently amended) The self-routing communication network of claim 3, wherein the shortener ~~means for reducing the size of the frame-start-sequence comprise~~ comprises a clock ~~means for~~ to time ~~timing the~~ an occurrence of the predetermined amount of the frame-start-sequence.

6. (Currently amended) The self-routing communication network of claim 3, wherein the shortener ~~means for reducing the size of the frame-start-sequence comprise~~ comprises a bit ~~detection means for~~ detector to detect ~~detecting the~~ an occurrence of the predetermined amount of the frame-start-sequence.

7. (Previously amended) The self-routing communication network of claim 1, wherein the network is based on a deterministic media access scheme.

8. (Previously amended) The self-routing communication network of claim 1, wherein the network is arranged for real-time communication.

9. (Currently amended) A star coupler for use in a self-routing communication network having a plurality of nodes coupled via communication paths and a plurality of star couplers for communication of frames of information between the nodes ~~of frames of information~~,

the star coupler having a plurality of inputs and a plurality of outputs, wherein the star coupler includes ~~means for~~ an input detector to sense ~~sensing~~ which input of ~~it's~~ the plurality of inputs of the star coupler first receives a frame of information and for passing only the frame of information first received, and the frames of information each have a frame-start-sequence, and the star coupler further includes ~~means for~~ a frame-start-sequence changer to change ~~changing~~ the frame-start-sequence in a predetermined manner before outputting the frame of information, whereby interconnection failure in the network is diagnosable ~~may be diagnosed~~ by ~~analysing~~ analyzing ~~from~~ the frame-start-sequence.

10. (Currently amended) The star coupler of claim 9, wherein the ~~means for changing~~ the frame-start-sequence changer in a predetermined manner comprises a shortener to ~~means for reducing~~ reduce the size of the frame-start-sequence by a predetermined amount.

11. (Original) The star coupler of claim 10, wherein the predetermined amount comprises 2 bits.

12. (Currently amended) The star coupler of claim 10, wherein the shortener ~~means for reducing the size of the frame-start-sequence comprise~~ comprises a clock ~~means for~~ to time ~~timing the~~ an occurrence of the predetermined amount of the frame-start-sequence.

13. (Currently amended) The star coupler of claim 10, wherein the shortener ~~means for reducing the size of the frame-start-sequence comprise~~ comprises a bit ~~detection means for~~ detector to detect ~~detecting~~ ~~the~~ an occurrence of the predetermined amount of the frame-start-sequence.

14. (Previously amended) The star coupler of claim 9, wherein the network is based on a deterministic media access scheme.

15. (Previously amended) The star coupler of claim 9, wherein the network is arranged for real-time communication.